

On the equivalence problem of generalized Abel ODEs under the action of the linear transformations pseudogroup

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Abstract

© 2016, Pleiades Publishing, Ltd. In the present paper we establish the necessary and sufficient conditions for two generalized Abel differential equations to be locally equivalent under the action of the pseudogroup of linear transformations of the form $\{x \mapsto f(x), y \mapsto g(x) \cdot y + h(x)\}$. These conditions are formulated in terms of differential invariants.

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Keywords

Abel differential equations, differential invariants, point transformations